

5a.

REPORT ON BOILERS.

No.

94107

Received at London Office

Writing Report

6261 700 81

192

When handed in at Local Office

18 JUL 1929

192

Port of London (Gosport)

Survey held at Kings Lynn

Date, First Survey 24 AUGUST 1928. Last Survey 18 JANUARY 1929

on the S.S. "ANGEL"

(Number of Visits 8) Gross 113.31 Tons Net

Built at Kings Lynn

By whom built Kings Lynn Shipyard Co. Ltd. Yard No. 249 When built 1929

as made at Beccles

By whom made Elliott & Garrod Ltd.

Engine No. 6650 When made 1929

as made at Kings Lynn

By whom made A. Dodman & Co. Ltd.

Boiler No. 1167 When made 1929

Horse Power 34

Owners Angel Co. Ltd.

Port belonging to San Sebastian

LITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appleby Iron Co. Ltd.

(Letter for Record S.)

Heating Surface of Boilers 635 sq ft

Is forced draught fitted No.

Coal or Oil fired Coal.

and Description of Boilers One. Single ended.

I. S. B.

Working Pressure 200 lbs.

ed by hydraulic pressure to 350 lbs. Date of test 18-1-29 No. of Certificate 281

Can each boiler be worked separately

a of Firegrate in each Boiler 21.6 sq ft

No. and Description of safety valves to each boiler 2. Spring loaded.

of each set of valves per boiler (per Rule 3.23 3.5" as fitted 4.8 4")

Pressure to which they are adjusted 205 lbs. Are they fitted with easing gear Yes.

ase of donkey boilers, state whether steam from main boilers can enter the donkey boiler

allest distance between boilers or uptakes and bunkers or woodwork 12"

Is oil fuel carried in the double bottom under boilers

allest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated No.

greatest internal dia. of boilers 9'-0"

Length 9'-0"

Shell plates: Material Steel

Tensile strength 27-33 tons

thickness 29/32"

Are the shell plates welded or flanged No.

Description of riveting: circ. seams end D. R. lap.

g. seams T. R. D. B. S. (3 rivets)

Diameter of rivet holes in circ. seams 1 1/16" long. seams 1 7/16"

Pitch of rivets 3 1/4" 4 1/2"

Percentage of strength of circ. end seams plate 68 rivets 48

Percentage of strength of circ. intermediate seam plate rivets

Percentage of strength of longitudinal joint plate 76.4 rivets 97.5 combined

Working pressure of shell by Rules 202 lbs.

Thickness of butt straps outer 3/4" inner 3/4"

No. and Description of Furnaces in each Boiler 2. Furn. Corrugated.

2. C.P.

Material Steel

Tensile strength 26-30 tons

Smallest outside diameter 26 3/4"

26 6"

Length of plain part top bottom

Thickness of plates crown 3/8" bottom 3/8"

Description of longitudinal joint Weld.

Dimensions of stiffening rings on furnace or c.c. bottom

Working pressure of furnace by Rules 200 lbs.

nd plates in steam space: Material Steel

Tensile strength 26-30 tons

Thickness 7/8"

Pitch of stays 1-4" x 10 1/2"

ow are stays secured Double nuts & washers

Working pressure by Rules 245 lbs.

ube plates: Material front Steel back Steel

Tensile strength 26-30 26-30

Thickness 1 1/8"

lean pitch of stay tubes in nests 8 3/4"

Pitch across wide water spaces 15 1/4"

Working pressure front 200 lbs back 219 lbs

irders to combustion chamber tops: Material Steel

Tensile strength 28-32

Depth and thickness of girder

t centre 8 5/8" x 7/16" Double

Length as per Rule 23"

Distance apart 9 1/2"

No. and pitch of stays

n each Two. 6 5/8"

Working pressure by Rules 204 lbs.

Combustion chamber plates: Material Steel

Tensile strength 26-30

Thickness: Sides 5/8"

Back 1 1/8"

Top 5/8"

Bottom 5/8"

Pitch of stays to ditto: Sides 6"

Back 7 7/8" x 7 7/8" Top 6 5/8" x 9 1/2"

Are stays fitted with nuts or riveted over Nuts.

Working pressure by Rules 202 lbs.

Front plate at bottom: Material Steel

Tensile strength 26-30

Thickness 7/8"

Lower back plate: Material Steel

Tensile strength 26-30

Thickness 5/8"

Pitch of stays at wide water space 15 1/4" x 7 7/8"

Are stays fitted with nuts or riveted over Nuts.

Working Pressure 214 lbs.

Main stays: Material Steel

Tensile strength 28-32

Diameter At body of stay, 2 1/4" + 2 1/2" Over threads

No. of threads per inch 9

Area supported by each stay 168 sq in

Working pressure by Rules 206

Screw stays: Material Steel

Tensile strength 26-30

Diameter At turned off part, 1 1/2" Over threads

No. of threads per inch 9

Area supported by each stay 62 sq in

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Working pressure by Rules **202** Are the stays drilled at the outer ends **no** Margin stays: Diameter { At turned off part, **1 3/4"** or Over threads **1 3/4"**

No. of threads per inch **9** Area supported by each stay **90.5"** Working pressure by Rules **201**

Tubes: Material **Steel** External diameter { Plain **3 1/4"** Stay **3 1/4"** Thickness { **8 L.S.G.** **1/4" + 5/16"** No. of threads per inch **9"**

Pitch of tubes **4 3/8" x 4 3/8"** Working pressure by Rules **(P) 220 lb. (S) 205 lb.** Manhole compensation: Size of opening in shell plate **15" x 19"** Section of compensating ring **7 1/2" x 7/8"** No. of rivets and diameter of rivet holes **42. 1 1/8"**

Outer row rivet pitch at ends **5 5/16"** Depth of flange if manhole flanged **3 1/8"** Steam Dome: Material **Steel**

Tensile strength **26-30** Thickness of shell **1/2"** Description of longitudinal joint **S.R. Double butt straps.**

Diameter of rivet holes **15/16"** Pitch of rivets **2 1/2"** Percentage of strength of joint { Plate **62.75** Rivets **92**

Internal diameter **2'-6"** Working pressure by Rules **275 lb.** Thickness of crown **1 1/2"** No. and diameter of stays **no** Inner radius of crown **2'-6"** Working pressure by Rules **208 lb.**

How connected to shell **riveted** Size of doubling plate under dome **4'-3" x 3/4"** Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell **15" x 2 7/8" Dome flange. + 1 1/8" x 5" in Dome doubling plate.**

Type of Superheater

Manufacturers of { Tubes Steel castings

Number of elements Material of tubes Internal diameter and thickness of tubes

Material of headers Tensile strength Thickness Can the superheater be shut off and the boiler be worked separately

Is a safety valve fitted to every part of the superheater which can be shut off from the boiler

Area of each safety valve Are the safety valves fitted with casing gear Working pressure as per Rules

Pressure to which the safety valves are adjusted Hydraulic test pressure: tubes, castings and after assembly in place Are drain cocks or valves fitted to free the superheater from water where necessary

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with

Yes

The foregoing is a correct description,

A. H. G. G. G.

Manufacturer.

Dates of Survey { During progress of, 1928. Aug 24. Oct 1. 16 Nov 12. Dec 14 work in shops - - - 1929. JAN 3. 14. 8

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

Total No. of visits **8 (in shops)**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

This boiler has been built under Special Survey in accordance with the Rules and approved plan. The material + workmanship are good.

Survey Fee £ **4 : 4 : 0**

Travelling Expenses (if any) £ **5 : 0 : 6**

When applied for,

192

When received,

192

A. E. Farminier

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

See Report attached



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